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Location ID: <u>BLM-8-418</u> Field Representative(s): <u>P. Egan</u>
Northing: <u>231423.04</u> Easting: <u>403768.31</u>
Date Started: <u>13 June 1988</u> Date Completed: <u>28 June 1988</u>
Drilling Method: <u>Air-foam rotary</u> Drilling Contractor: <u>Larjon</u>
Driller: <u>J. Gower</u>
Total Depth Borehole: 452' Total Depth Well Casing: 433.7'
Total Depth Surface Casing: <u>105'</u>
Diameter Well Casing: <u>4"</u> Diameter Surface Casing: <u>10"</u>
Length of Bottom Blank: <u>5.3'</u>
Type of Screen: <u>extra strength</u> 0.02 slot
Screen Interval: 418' to 428.4'
Water First Detected: <u>426'</u> Water Level Open Borehole: <u>316'</u> Water Level Cased Borehole: <u>321.8'</u>
Quik-Foam Use: 5 gallons
Estimated Water Use: 10,600 gallons used during drilling 12,477 gallons recirculated (this also includes formation water blown from hole)
Well Casing:
4in x 3ft SCD 40 PVC:stock SS centralizers:4in x 5ft SCD 40 PVC:custom SS centralizers: 14in x 10ft SCD 40 PVC:4"x2' SS locking riser: 14in x 20ft SCD 40 PVC:4" SS locking cap: 1Total SCD 40 PVC pipe:ft4" SS female cap: 1
4in x 3ft SCD 5 SS pipe: 4in x 5ft SCD 10 SS pipe: 1 4in x 10ft SCD 5 SS pipe: 1 4in x 10ft SCD 10 SS pipe: 1 4in x 20ft SCD 5 SS pipe: 20 4in x 20ft SCD 10 SS pipe: 1 Total SCD 5 SS pipe: 410.1 ft Total SCD 10 SS pipe: 15 ft

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Well Completion:

 100# bags 16/40 sand:
 5 bags

 100# bags 10/20 sand:
 0 bags

 100# bags 8/14 sand:
 0 bags

 100# bags 8/20 sand:
 28 bags

94# bags cement: 190 bags

5 gal. buckets bentonite: 2 buckets

50# bentonite powder: 11 bags

<u>Surface Casing:</u>

94# bags cement: 103 bags

50# bags bentonite powder: 10 bags

Pertinent Field Notes:

6/13/88	Drill pilot hole	, 0'-100',	8 7/8" bit.	1800 gallons water used.
	Ream, 14 3/4" bi	t, 0'-70'.	•	-

6/14/88 Ream, 14 3/4" bit, 70'-105'. Install 10" x 105' steel surface casing. 1100 gallons water used.

6/15/88 Drill, 9 7/8" bit, 105'-251'. Monitored main and auxiliary compressors. 1200 gallons water used. Using a second stabilizer to minimize drift.

6/16/88 Drill, 9 7/8" bit, 251'-350'. Monitored main and auxiliary compressors. Ruptured hydraulic line. Repaired at well site. 3000 gallons water used. Drilling is slow. May be due to large diameter of new stabilizer.

6/17/88 Drill, 9 7/8" bit, 350'-391'. Monitored main compressor. Stabilizer is slowing drilling process, therefore Larjon will take stabilizer back to yard to tool it to a smaller diameter. 2300 gallons water used.

6/22/88 Both water trucks broke down while returning from Well I with water. No drilling today.

6/23/88 Drill, 9 7/8" bit, 391'-432', core 432'-442', 100% recovery. 1000 gallons water used.

6/24/88 Drill, 9 7/8" bit, 432'-452', TD hole at 452'. 200 gallons water used.

6/25/88 Don Pearson of Southwest Surveys logged hole. Ran standard suite of logs plus drift. Chose screened interval at 418'-428'. Borehole drifted 23'. Install 100' of SS casing suspended within surface casing.

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6/26/88	Installed remainder of casing. Total casing in borehole: 4" x 437.8'. Install gravel pack, top plug (5.75') and some of the filler sand.
6 /27 /00	Install remainder of filler sand and grout. Grout is 63' from
6/27/88	
	the surface.
6/28/88	Develop well. Pump at 17 gpm for three hours. Pumped 2116
, ,	gallons. Finish grouting to surface.
6/30/88	
6/30/88	Pour concrete pad around well and set brass cap.